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To: JSAMAIL.JSA_SAC(PeteR)
Date: 2/11/99 11:04am
Subject: Concealed

Subject: Hi Peter - Here is my attempt to clarify some of the
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Hi Peter - Here is my attempt to clarify some of the sequencing topics relative to eastern and western Suisun
marsh. I suggest the following:

Prior to any restoration in the eastern Suisun marsh, (ie opening to full tidal action), the area shall be evaluated for
suitable habitat for salt marsh harvest mice, listed plant species, other sensitive species that may occur there.
Restoration sites with suitable habitat shall not be restored until the restoration of at least twice as much acreage of
tidal/high marsh/upland transition habitat has begun in the western Suisun marsh. In addition, an equal acreage
amount of habitat shall be maintained as managed marsh within the eastern Suisun marsh to provide for species
impacted by full tidal restoration until the newly restored habitat in the western Suisun marsh has developed to a
point where it can support the listed species impacted. (I know this is awkward but hopefully it gets the point
across - reword as you see fit)

You also asked for a statement about my view on the importance of the upland transition habitat adjacent to tidal
marsh so here's my try at that:

A critically important feature of any and all tidal marsh creation/restoration project is the inclusion of a wide, gradual
transition zone from the tidally influenced area to upland. This zone is generally absent or severely reduced in most
marshes and the push for creation of the maximum acreage of wetland often ignores the vital role this area plays in
the proper functioning of a healthy tidal marsh. In my opinion a 100 +

..acre tidal marsh with a narrow or abrupt transition zone would be less valuable to salt marsh harvest mice and
rails then a 60 acre tidal marsh with a wide, gradual transition to upland. The importance of this transition area as
refugal habitat, protected breeding habitat, feeding areas, etc. cannot be underestimated.

You also asked for a statement regarding size of tidal marshes:

As part of the San Francisco Bay Ecosystem Goals Project a lot of time was spent discussing how to best address
the issues of habitat loss and the future survival of listed species that utilize tidal marsh habitats. We recognized
that many of the mitigation projects that are designed to compensate for wetland losses are designed to accomplish
that on an acreage basis assuming that the created/restored wetland will provide for the habitat needs of the
species impacted. Through our discussions it was agreed that small, isolated tidal marshes (ie less than several
acres) cannot develop the complexity necessary to provide for tidal marsh species needs over long periods of time.
Although the created/restored tidal marshes might appear adequate and support the target species during the
monitoring period we doubted whether such systems could provide for the target species in perpetuity. A single,
localized catastrophic event could wipe severely impact such a marsh and, due to the small size, eliminate several
small mammal species with a low chance of recolonization.
The SF Bay Goals Project mammals group agreed that the best strategy to protect mammals that inhabit tidal
marshes would be to encourage large (ie greater than 1,000 acres) tidal marshes with wide transition zones to
upland habitats. These large wetlands should not be long narrow strips but rather blocks of marsh that were large
enough to permit the development of 2nd, 3rd, and 4th order channels. Lager enough to have a adequate tidal
prism that will keep the channels open and ultimately support the development of salt pannes. One of the mammals
group goals was to be able to recommend the development of tidal wetland clusters that, in the event of
catastrophic events in other tidal marshes around the Bay, would be able to provide for all the species present in
perpetuity. We did recognize that another way to accomplish the goal of large blocks of tidal marsh was to
recommend that smaller wetlands be connected to each other with corridors to allow movement within a larger
area. However, one problem with this strategy is that the smaller blocks may not be large enough to allow for the
development of the level of marsh complexity necessary to insure its persistence in perpetuity, hence the 1,000
acre figure.
I am somewhat uncomfortable even giving you an acreage figure (ie 1,000 acres) because of the

way it might be
used. Generally the Goals group feels that bigger is better and marshes of 2,000 acres are better than marshes of
1,000 acres.

Hope this helps. Please call (707) 944-5534 or e-mail me if you have questions.

Take care - Fred